

A Foliar Nematode Problem of Birds-Nest Fern

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A foliar nematode, Aphelenchoides fragariae, is a long-known pest of birds-nest fern, Asplenium nidus. Since May 1965, A. fragariae has been found on birds-nest fern in the following Florida counties: Manatee, Orange, Dade, Marion, and Hillsborough. Other states reporting this association are California, Connecticut, New Jersey, New York and Pennsylvania.

Symptoms:

The first symptom of A. fragariae infection is usually the presence of small water-soaked areas near the frond base. These areas generally change to dark brown or black frond lesions. Affected areas tend to enlarge upward from the frond bases and may extend through most of the frond. The affected areas may enlarge rapidly under conditions of high temperature and excessive moisture. Several fronds may show symptoms at the same time. Some fern plants, particularly young ones, may become severely affected. In most cases, the dark lesions will remain turgid, permitting affected fronds to remain standing.

Control:

There are few studies on A. fragariae as they affect birds-nest fern. Effective chemical control of this nematode on birds-nest fern is unknown at this time. The most practical control is destruction of infested plants and the sanitary handling of clean nursery stock. All potting soil, pots, containers and storage benches should be sterilized prior to the introduction of clean stock. Birds-nest fern plants which have been in close proximity to infected plants should be spaced at safe minimal distances to prevent further spread and should be watched closely for symptom development.



Fig. 1. Birds-nest fern leaves infested with Aphelenchoides fragariae.

Hosts:

A. fragariae has a wide host range, including plants of many plant families. Other ferns which are reported hosts of this nematode are:

Adiantum capillus-veneris
(Venus-hair fern)
Adiantum tenerum
(Brittle maidenhair fern)
Adiantum trapeziforme
(Diamond maidenhair fern)
Adiantum sp.
(Maidenhair fern)
Asplenium bulbiferum
(Mother spleenwort)
Asplenium diversifolium
Asplenium sp.
(Spleenwort)
Blechnum brasiliense
(Brazilian blechnum)
Blechnum fraxineum
Blechnum gibbum
Blechnum moorei
Blechnum sp.
Coniogramme japonica
(Bamboo fern)
Cystopteris bulbifera
(Berry bladder fern)
Cystopteris fragilis
(Brittle fern)
Dryopteris sp.
(Wood fern)
Lygodium circinatum
Lygodium sp.
(Climbing fern)
Lygodium volubile
Nephrolepis exaltata
(Boston fern)
Osmunda regalis
(Royal fern)

Phlebodium areum areolatum
Phlebodium areum mandianum
(Manda polypody)
Polypodium brasiliense
Polypodium percussum
(Nipple polypody)
Polypodium phymatodes
(East Indian polypody)
Polypodium punctatum
Polypodium vulgare
(Wallfern)
Polystichum munitum
(Western sword-fern)
Pteris alexandriae
Pteris altissima
Pteris altissima repandula
Pteris biaurita allosora
Pteris biaurita repandula
Pteris cretica
Pteris dentata
Pteris denticulata
Pteris longifolia
Pteris multifida
(Spider brake)
Pteris podophylla
Pteris pullucida
Pteris quadriaurita
Pteris serrulata
Pteris sp.
(Bracken, brake)
Pteris tremula
(Australian brake)
Tectaria barteri
Thelypteris reptans
(Creeping fern)